V – Claims

What is claimed is:

1) A DEMOUNTABLE TIRE RIM WITH SPARE INNER WHEEL AND TIRE FOR SAID TIRE RIM, which is intended to serve as assembly to a tire with which it comprises a wheel for vehicles and to one or more spare inner wheels which act with said flat tire, comprising:
   a) The body of the tire rim comprised by at least two complementary annular parts of which both side parts provide each side holding rims of the tire;
   b) Said complementary annular parts are provided with reciprocal coupling means;
   c) Between the complementary annular parts they conform assembly means for, at least, a spare inner wheel;
   d) The tire to be used with this tire rim and inner wheel shows modifications to adapt it to running under flat condition.
2) A DEMOUNTABLE TIRE RIM WITH SPARE INNER WHEEL AND TIRE FOR SAID TIRE RIM, according to claim 1, wherein the complementary annular parts conform assembly means for, at least, a spare inner wheel which diameter is larger than said tire rim diameter.
3) A DEMOUNTABLE TIRE RIM WITH SPARE INNER WHEEL AND TIRE FOR SAID TIRE RIM, according to claim 1 wherein reciprocal coupling means consist of each continuous threads formed on the coupling edges of the complementary annular parts.
4) A DEMOUNTABLE TIRE RIM WITH SPARE INNER WHEEL AND TIRE FOR SAID TIRE RIM according to claim 1 wherein the reciprocal

coupling means consist of a plurality of each threaded sectors on the edge of the whole perimeter of both segments adjacent to the tire rim which have, on one of their ends, an elevated part acting as stop, inserted with non threaded sectors which surface is at a lower level relative to the threaded sectors, being these different sectors, of the same width, so that they may be inserted to one another to be fixed by means of threading spindrift movements.

5) A DEMOUNTABLE TIRE RIM WITH SPARE INNER WHEEL AND TIRE FOR SAID TIRE RIM according to claim 1 wherein the reciprocal coupling means are complemented by interconnection and fixation means.

6) A DEMOUNTABLE TIRE RIM WITH SPARE INNER WHEEL AND TIRE FOR SAID TIRE RIM according to claim 5 wherein the interconnection and fixation means between the complementary annular parts consist of a plurality of sets of equal and equally-spaced openings distributed on flanges placed at the perimeter of both edges, which faced to each other form passages for fixation screws.

7) A DEMOUNTABLE TIRE RIM WITH SPARE INNER WHEEL AND TIRE FOR SAID TIRE RIM according to claim 5 wherein the interconnection and fixation means between the complementary annular parts consist of a plurality of sets of equal and equally-spaced openings distributed on flanges placed at the perimeter of both edges, which faced to each other form passages for lockpin bolts.

8) A DEMOUNTABLE TIRE RIM WITH SPARE INNER WHEEL AND TIRE FOR SAID TIRE RIM according to claim 1 wherein the assembly

means for the spare inner wheel consist of an annular depression which side edges are provided by both complementary annular parts.

9) A DEMOUNTABLE TIRE RIM WITH SPARE INNER WHEEL AND TIRE FOR SAID TIRE RIM according to claim 8 wherein the annular depression consists of a sliding and slipping track for the spare inner wheel.

10) A DEMOUNTABLE TIRE RIM WITH SPARE INNER WHEEL AND TIRE FOR SAID TIRE RIM according to claim 8 wherein the annular depression presents annular grooves which decrease contact and friction surface with the spare inner wheel.

11) A DEMOUNTABLE TIRE RIM WITH SPARE INNER WHEEL AND TIRE FOR SAID TIRE RIM according to claim 1 wherein the assembly means for the spare inner wheel consist of an annular depression and each side holding elastic rims of said spare inner wheel; said side holding rims are arranged against the side edges provided by both complementary annular parts, overrunning their height.

12) A DEMOUNTABLE TIRE RIM WITH SPARE INNER WHEEL AND TIRE FOR SAID TIRE RIM according to claim 1 which comprises assembly means for more than one spare inner wheel, which means consist of an annular depression, divided in, at least, two sectors, by means of, at least, an intermediate elastic rim.

13) A DEMOUNTABLE TIRE RIM WITH SPARE INNER WHEEL AND TIRE FOR SAID TIRE RIM according to claim 1 wherein the complementary annular parts are provided with reciprocal coupling means which end at respective contact and tightness even surfaces.

14) A DEMOUNTABLE TIRE RIM WITH SPARE INNER WHEEL AND TIRE FOR SAID TIRE RIM according to claim 13 which comprises contact and tightness surfaces provided with a plurality of concentric annular ledges which have a reciprocal insertion arrangement to one another.

15) A DEMOUNTABLE TIRE RIM WITH SPARE INNER WHEEL AND TIRE FOR SAID TIRE RIM according to claim 14 which comprises, between the opposite surfaces, a laterally flat annular elastomeric joint which side surfaces are even.

16) A DEMOUNTABLE TIRE RIM WITH SPARE INNER WHEEL AND TIRE FOR SAID TIRE RIM according to claim 13 which comprises, between the opposite surfaces, a laterally flat annular elastomeric joint with a plurality of concentric annular edges on both side surfaces.

17) A DEMOUNTABLE TIRE RIM WITH SPARE INNER WHEEL AND TIRE FOR SAID TIRE RIM according to claim 1 wherein the assembly means for a spare inner wheel comprise an annular depression and side retention means of said inner wheel.

18) A DEMOUNTABLE TIRE RIM WITH SPARE INNER WHEEL AND TIRE FOR SAID TIRE RIM according to claim 17 wherein the spare inner wheel forms cooperation means with the retention means.

19) A DEMOUNTABLE TIRE RIM WITH SPARE INNER WHEEL AND TIRE FOR SAID TIRE RIM according to claim 1 which comprises bearing means which as bearing rollers are inserted between the inner wheel and the bottom of the annular depression.

20) A DEMOUNTABLE TIRE RIM WITH SPARE INNER WHEEL AND

TIRE FOR SAID TIRE RIM according to claim 1 which comprises a one-piece inner wheel made of a single material.

21) A DEMOUNTABLE TIRE RIM WITH SPARE INNER WHEEL AND TIRE FOR SAID TIRE RIM according to claim 1 which comprises an inner wheel consisting of a plurality of segments mutually related by strong and flexible joining means.

22) A DEMOUNTABLE TIRE RIM WITH SPARE INNER WHEEL AND TIRE FOR SAID TIRE RIM according to claim 1 which comprises a spare inner wheel made of elastomeric material.

23) A DEMOUNTABLE TIRE RIM WITH SPARE INNER WHEEL AND TIRE FOR SAID TIRE RIM according to claim 1 which comprises an inner wheel made of plastic material.

24) A DEMOUNTABLE TIRE RIM WITH SPARE INNER WHEEL AND TIRE FOR SAID TIRE RIM according to claim 1 which comprises an inner wheel made of a light metal.

25) A DEMOUNTABLE TIRE RIM WITH SPARE INNER WHEEL AND TIRE FOR SAID TIRE RIM according to claim 1 which comprises an inner wheel made of synthetic fibers and a material which compacts them.

26) A DEMOUNTABLE TIRE RIM WITH SPARE INNER WHEEL AND TIRE FOR SAID TIRE RIM according to claim 1 wherein the inner wheel has a structural reinforcement inner core.

27) A DEMOUNTABLE TIRE RIM WITH SPARE INNER WHEEL AND TIRE FOR SAID TIRE RIM according to claim 1 which comprises an inner wheel provided with a metal coating on its major surface di-

ameter provided with an outer layer consisting of polytetrafluoroethylene polymer (PTFE).

28) A DEMOUNTABLE TIRE RIM WITH SPARE INNER WHEEL AND TIRE FOR SAID TIRE RIM according to claim 1 which comprises an inner wheel provided with flexibilizing means consisting of a plurality of narrowings of its cross section.

29) A DEMOUNTABLE TIRE RIM WITH SPARE INNER WHEEL AND TIRE FOR SAID TIRE RIM according to claim 1 wherein the inner wheel forms recesses and ledges on its base which diminish its contact with the bottom of the annular depression.

30) A DEMOUNTABLE TIRE RIM WITH SPARE INNER WHEEL AND TIRE FOR SAID TIRE RIM according to claim 1 wherein the inner wheel forms recesses and ledges on its periphery which diminish its contact with the inner surface of the tire tread.

31) A DEMOUNTABLE TIRE RIM WITH SPARE INNER WHEEL AND TIRE FOR SAID TIRE RIM according to claim 1 wherein the inner wheel is crossed by a plurality of cross section openings as easing and elasticity means.

32) A DEMOUNTABLE TIRE RIM WITH SPARE INNER WHEEL AND TIRE FOR SAID TIRE RIM according to claim 1 wherein on the outer surface of each lateral segment of the tire rim, there are at least two blind holes placed at the same radius height, equally-spacedly separated to each other, as a means to modify on them, elements which facilitate threading and unthreading movements of the segments of the tire rim to each other.

33) A DEMOUNTABLE TIRE RIM WITH SPARE INNER WHEEL AND TIRE FOR SAID TIRE RIM according to claim 1 wherein the lateral segments of the tire rim have all around the outer perimeter of the lip of the annular ledge and its adjacent parts, next to both side rims, a plurality of recesses and ledges mutually equal and regularly spaced as a means to limit rotation of the tire on the tire rim upon running under flat condition.

34) A DEMOUNTABLE TIRE RIM WITH SPARE INNER WHEEL AND TIRE FOR SAID TIRE RIM according to claim 1 wherein the tire presents all around the perimeter of both inner edges of its minor diameter, a plurality of recesses and ledges with the same manner and distribution of those found on the tire rim.

35) A DEMOUNTABLE TIRE RIM WITH SPARE INNER WHEEL AND TIRE FOR SAID TIRE RIM according to claim 1 wherein the tire presents on the inner surface of the support tread which faces the major diameter surface of the inner wheel, a plurality of ledges mutually parallel which form a bearing means guided on the inner wheel upon running under flat condition.